January 2013

Do Women Tell Their Contraceptive Care Providers About When They Have Abortions?

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A Thesis Submitted to the

Yale University School of Medicine

in Partial Fulfillment of the Requirements for the

Degree of Doctor of Medicine

by

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2013

Abstract

DO WOMEN TELL THEIR CONTRACEPTIVE CARE PROVIDERS ABOUT WHEN THEY HAVE THEIR ABORTIONS?
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We hypothesize that women underreport their abortions and contraceptive failures to their contraceptive care providers. If they do underreport, then their contraceptive care providers do not know about the contraceptive failures and cannot adjust their contraceptive practice accordingly. Without this adjustment, these women may receive poor contraceptive care. The political nature and stigma surrounding abortion have isolated it from the rest of women's health care to the point that a gap in comprehensive contraceptive care exists. We studied the patient side of this gap by determining women's rate of disclosure of abortion to their contraceptive care providers, who are separate from the abortion providers, reasons for nondisclosure, and what factors are associated with disclosure.

A voluntary, anonymous, self-administered questionnaire of women seeking abortion services from Planned Parenthood of Southern New England was conducted to determine whether women have disclosed or plan to disclose their abortion to their contraceptive care providers. The questionnaire also collected information on contraceptive care provider characteristics, demographics, and reproductive health history. We conducted descriptive univariate and bivariate statistics as well as logistical regression modeling around disclosure of abortion.

Overall, 44% of women did not disclose their abortion to their contraceptive care provider. The most common reasons for nondisclosure of the abortion were “I don’t want them to know I’m having an abortion” (44%), followed by “I’m changing providers” (20%). Fourteen percent of women cited embarrassment about the pregnancy and fear of judgment as other reasons for nondisclosure. Women were 72% less likely to disclose to an obstetrical/gynecological (OB/GYN) provider (adjusted OR 0.28, 95% CI 0.10-0.75) and 90% less likely to disclose to a non-OB/GYN provider (adjusted OR 0.10, 95% CI 0.02-0.42), compared to a Planned Parenthood contraceptive care provider.

These results show that abortion stigma contributes to a broad shroud of secrecy since almost half of women do not disclose their abortion to their contraceptive care provider, who is separate from their abortion provider. Only provider type was associated with disclosure in a statistically significant way, while more intrinsic characteristics of the women, such as demographic or reproductive health history factors, were not. This suggests that abortion stigma is pervasive and can affect all types of women. Women’s health providers of any type have a unique responsibility to continue to destigmatize abortion and encourage use of the most effective methods of long acting reversible contraception, such as the intrauterine device and subdermal implant. In doing so, we may halt the unintended pregnancy epidemic in the United States.

Acknowledgements

The Society of Family Planning Research Fund has provided financial support for this project. I would also like to acknowledge Planned Parenthood of Southern New England, and specifically Clair Kaplan and the rest of the clinic staff, for supporting and implementing the research. In addition, I would like to thank Jessica Illuzzi for her thoughtful advice and help with the statistical analyses. Last, but not least, I would like to give my sincere thanks to Nancy Stanwood, an incredible mentor, advisor, and source of support both professionally and personally.

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Introduction

Summary

We hypothesize that women underreport their abortions and contraceptive failures to their contraceptive care providers. If women do underreport, then the contraceptive care providers do not know about the patients' contraceptive failures and cannot adjust their contraceptive practice accordingly. Thus these providers are partly steering blind. The political nature and stigma surrounding abortion have isolated it from the rest of women's health care to the point that a gap exists between the preventative care of contraception and the treatment for failed prevention, i.e., abortion care. In the current research, we have begun studying the patient side of this gap by examining issues around abortion disclosure to contraceptive care providers.

Epidemic of Unintended Pregnancy

The majority of the induced abortions in the United States occur in the setting of an unintended pregnancy. The overall unintended pregnancy rate in the United States has remained high over the past several years. In 2006, 6.7 million pregnancies occurred, of which 49% were unintended, compared to 48% in 2001 (1). Low-income, cohabitating, and minority women aged 18-24 years with less than a high school education are at especially high risk for unintended pregnancies (2). Despite the fact that the unintended pregnancy rate remains high, the rate of abortion among those unintended pregnancies decreased from

47% in 2001 to 43% in 2006, while the unintended birth rate correspondingly increased (1-2). The decline in abortions over the past few years may be attributable to increased stigmatization for abortion and decreased access stemming from more stringent legal restrictions or lack of enough trained providers, or both.

To understand the potential causes of unintended pregnancy, one must consider contraceptive use patterns. Three possible scenarios that lead to unintended pregnancy include contraceptive nonuse, inconsistent or incorrect contraceptive use, or contraceptive failure. In the United States, about 50% of women with unintended pregnancy were using contraception in the cycle when they conceived (2). Further, 60% of women who have abortions were using some method of contraception in the month they became pregnant (3). The most commonly used methods in the month of conception were the male condom (28%) and oral contraceptives (14%) (3). The majority of pill users (76%) and almost half of condom users (49%) reported using these methods inconsistently or incorrectly, and as such, inconsistent or incorrect method use was the most common reason these women became pregnant (3).

Among contraceptive nonusers who had abortions, 33% of them thought that they had a low risk of becoming pregnant and 32% of them had concerns about using contraception, including fear of side effects or problems with use in the past (3). These findings show that women need accurate information about both the probability of conceiving without contraception as well as the safety profiles of the most effective methods of contraception. Since many women with

unintended pregnancy and abortion cite difficulties with contraceptives requiring daily use or use at every instance of sex, they would benefit more from “forgettable” contraceptive methods, specifically the intrauterine device or subdermal implant. These “forgettable” contraceptives, collectively called long-acting reversible contracption (LARC), only require effort to have the device placed, while having the benefit of providing up to three to ten years of highly effective contraception thereafter. The findings also emphasize the important role of the contraceptive care provider to give information to women, while taking individual needs and past use into account, so that women are fully informed when choosing a method of contraception to prevent unintended pregnancy.

Other methods of contraception that are less effective with typical use compared to LARC include oral contraceptive pills, transdermal patch, and vaginal ring. Oral contraceptive pills contain either combined synthetic estrogen and progesterone or synthetic progesterone only. They inhibit ovulation and thicken cervical mucus to prevent pregnancy. The pill requires daily use, which can pose a challenge for some women. The transdermal patch and vaginal ring also contain combined synthetic estrogen and progesterone and have the same mechanism as the pill. The patch is applied to the skin and is changed weekly. The vaginal ring is inserted in the vagina and is changed monthly. The progesterone injection, called depot medroxyprogesterone acetate, lasts for three months and requires repeat appointments to receive additional injections every twelve weeks. The mechanism of the action for preventing pregnancy is inhibition of ovulation. Other less effective methods of contraception include barrier

methods, such as the male or female condom, diaphragm, or withdrawal ("pulling out"). These methods require use at every instance of sex to be effective. Condoms are important because they also provide protection against sexually transmitted infections. The least effective methods of contraception include fertility awareness methods, also called the rhythm method, and spermicide. Emergency contraception, or the "morning-after pill", consists of synthetic progesterone. It prevents pregnancy by inhibiting ovulation, thickening cervical mucus to prevent entry of sperm, and thinning the uterine lining to prevent implantation of an embryo. It has no effect if the woman is already pregnant, or in other words if an embryo has already implanted.

Abortion Provision in the United States

The statistics about abortion providers in the United States highlight the disconnect in care between abortion and the rest of women's health services. Abortions are performed in a variety of settings, such as hospitals and physician offices, but the majority (94%) occurs in the clinic setting (4)**.** In 2008, 21% of all abortion providers, located at high volume abortion clinics, provided the majority of all abortions (70%) as compared to roughly the same number of providers in general physician offices who only performed 1% of all abortions (4)**.** Unfortunately, the number of abortion providers has decreased significantly, by 38%, between 1982 and 2005, but has remained stable in 2008 with 1,793 providers (4).

The decrease in abortion providers underscores the fact that the current abortion provider pool is getting older and retiring, while the next generation of physicians is not stepping up in adequate numbers to replace them. Many of the current abortion providers are older physicians. They provide abortions because they saw firsthand the serious health consequences and deaths resulting from illegal and unsafe abortion in the United States prior to its legalization through the landmark Supreme Court case of *Roe v. Wade* in 1973. The newer generations of physicians and physicians-in-training have not seen firsthand the morbidity and mortality related to unsafe abortion, and thus may not be aware of the importance of continuing to learn about the medical and surgical techniques of abortion, to then in turn provide safe and legal abortions.

The decrease in abortion providers translates into decreased access for abortion. In the United States, 87% of counties do not have an abortion provider, and 35% of women of reproductive age live in those counties (5). Also, 69% of metropolitan counties do not have access to an abortion provider, and 97% of rural counties have no abortion provider (6). Women are sometimes forced to travel long distances for abortion services. Non-hospital providers estimate that 8% of their patients travel more than 100 miles and 19% travel 50-100 miles for abortion services (6). The geographic barriers to abortion care are substantial.

Under-Reporting of Abortion by Women

Even though the abortion rate may have decreased over the past few years, induced abortion overall remains a common procedure in the United

States. About one in three women in the United States between ages 15-44 years have had at least one abortion in their lifetime (7). Despite the fact that abortion is a common and legal procedure, women only report about 45% of abortions performed in the United States (8-9). Another study surveying low-income patients found 29% report the full number of abortions they have had (10). The percentage of women under-reporting also appears to be greater in non-white women than in white women (10-11). In terms of survey methods, self-administered questionnaires produced higher levels of abortion reporting than face-to-face interviews (8). Thus women under-report the occurrence and frequency of abortion in epidemiologic studies. This under-reporting likely transfers into the physician office when women are asked to give an obstetrical history as part of routine gynecological care.

Abortion Stigma

Women under-report abortions because of the social stigma around abortion in the United States. Kumar et al. in 2009 describe that abortion transgresses three different feminine ideals of "female sexuality solely for procreation, the inevitability of motherhood, and instinctive nurturance of the vulnerable". They also describe the idea of potential invisibility of abortion as opposed to continuous stigma of diagnosable disease, such as HIV or a physical deformity.

Some qualitative studies examining abortion stigma and issues of disclosure more broadly have shown that there is an implicit rule of secrecy (12-

14). The secrecy around abortion exists because women often fear that disclosure could lead to disapproval by others, loss of social or financial support, or they may assume that others are unwilling to listen. Other potential reasons for women's nondisclosure of abortions include struggle in dealing with their own sense of morality, which may be in conflict with the abortion itself, or embarrassment about failing to prevent an unplanned pregnancy. Concealing the abortion often serves as a coping mechanism for the stigma to minimize any negative consequences (12, 14). While silence may initially benefit the woman by avoiding any conflict, it leads to a vicious cycle of repeated internalization of negative self-perceptions and thus reinforces the stigma (15). It also leads to feelings of isolation and deviancy despite the fact that abortion is quite common (16). One study showed that the more stigmatized women felt, the more they felt the need to keep their abortions a secret from friends and family (15). Almost 70% of women disclosed their emotions about the abortion "not at all" or only "a little bit." This led to higher rates of thought suppression and intrusive thoughts that were associated with post-abortion psychological distress (15). In addition to the potential for psychological distress, abortion secrecy can also lead to adverse health consequences. A recent case report highlights two cases where women felt the need to keep their abortion a secret, even in the setting of health complications (17). Their need for secrecy directly led them to delay seeking care for complications, worsening the morbidity of the complications (17). Overall the literature shows that abortion stigma plays a detrimental role in women's lives and contributes to a broad shroud of secrecy.

Abortion Disclosure to Contraceptive Care Provider

As an extension to this broad shroud of secrecy, we hypothesize that many women do not disclose their abortions to their contraceptive care providers. This may be during routine gynecologic history taking related to new contraceptive care, or more directly may be around the time of experiencing an unintended pregnancy and having an abortion. This latter scenario is our time of interest in this study. Because abortions leave no evidence of their occurrence, women have the ability to under-report without their contraceptive care providers knowing otherwise. Since many women do not report their abortions in epidemiological research, we hypothesize that women also under-report their contraceptive failures and abortions to their contraceptive care providers. If these providers are unaware of their patients' abortions, they do not know their current contraceptive care has failed and cannot modify their patients' contraceptive plans to better suit the patients' needs. Ultimately, patients receive suboptimal family planning care. Imagine the difficulty of a general primary care provider trying to manage a diabetic patient's medication regimen while unaware of the glycosylated hemoglobin level or of a recent admission for diabetic ketoacidosis.

Though women often need both contraceptive care and abortion services, a disconnect exists in the way these services are delivered. The political climate around abortion in the United States has segregated abortion services from the rest of women's health care so women are often shunted to independent abortion clinics. Some free-standing abortion clinics have high volume and subsequently insufficient time to address comprehensive contraception care. About 60% of

abortion centers provide only 6-15 minutes of contraceptive counseling and most commonly provide oral contraceptives, vaginal ring, or progesterone injection instead of more effective long-acting reversible methods (18). Only 32% of centers surveyed provide the intrauterine device or subdermal implant immediately postabortally, with comprehensive family planning centers being most likely to do so (18). The other side of the disconnect in comprehensive contraceptive services that has yet to be studied consists of clinicians who provide contraception and not abortion who may not be aware of their patients' contraceptive failures.

Our study addresses this disconnect from the patient perspective by determining what proportion of women, at the time of abortion, have told or are planning to tell their contraceptive care provider about the unintended pregnancy and abortion. In this research, the contraceptive care provider to whom we refer is separate from the abortion provider. We examined reasons for and factors associated with disclosure. This specific research question has not been studied directly, and may have significant implications for all practicing women's health providers.

Statement of Purpose and Specific Aims

- To determine what proportion of women, at the time of their abortion, have told or are planning to tell their contraceptive care provider about their pregnancy and abortion.
- To determine why women do not tell their contraceptive care providers about their abortion.
- To determine factors associated with abortion disclosure to contraceptive care providers.

Methods

We conducted an anonymous, voluntary, self-administered, written survey of women seeking abortion services to determine whether they have disclosed or plan to disclose their abortion to their contraceptive care providers. The Yale Human Investigation Committee and the Planned Parenthood Federation of America Research Department approved the protocol. They deemed the study of minimal risk and waived written consent because a signed written consent form would be the only record linking the patient to the anonymous questionnaire.

An introductory statement on the survey explained the purpose of the study and asked for voluntary participation while assuring anonymity. Decision to participate in the survey did not affect the subject's medical care, and subjects had the option to decline to participate or to refrain from answering any particular question. Each subject was instructed to read the introductory statement, complete the survey, and then return the survey to a covered box provided in each clinic, whether or not she had chosen to complete it. The survey was available in English and Spanish. Contact information for study personnel was included on the cover sheet.

Women of any age presenting for either surgical or medication abortion care were included. Adolescents were included without parental consent since the study was of minimal risk and because of their right to access reproductive health care services without parental consent in general. We excluded patients who: could not read or write in English or Spanish; did not have capacity to

provide consent; were not pregnant or seeking abortion services; or were prisoners or wards of the state.

The survey instrument queried participants about basic demographics, reproductive health history, and methods of contraception used both during the month of conception and throughout their lifetime. The survey included questions on characteristics of the contraceptive care provider for subjects who had seen a provider for contraceptive care in the two years prior to completing the survey.

Our main abortion disclosure outcome was elicited by the two following questions:

> "Does this [contraceptive care] provider know that you are having the Abortion?
>
> (1) Yes, and they referred me to an abortion provider,
>
> (2) Yes, but they did NOT refer me to an abortion provider,
>
> (3) No.
>
> If NO, do you think you will tell them about the Abortion?
>
> (1) Yes,
>
> (2) No,
>
> (3) No, but I will tell them I had a miscarriage,
>
> (4) Not sure.
>
> If you think you will NOT tell them about your Abortion, please CHECK ALL of the reasons you don't want to tell them:
>
> (1) I'm embarrassed I got pregnant,

(2) I don't want them to know I'm having an abortion,

(3) I'm afraid they will be disappointed in me,

(4) I'm afraid they will judge me,

(5) I'm afraid other people in my life may find out about the pregnancy from their office,

(6) They do not provide abortions,

(7) I'm afraid my parents will find out,

(8) Other reason:_____."

Similar wording was used to elicit information about disclosure of the pregnancy. See appendix for complete survey. The faculty mentor designed the first draft of the survey. The student revised the survey through multiple iterations, gathering and implementing feedback from the faculty mentor, Planned Parenthood's research department and key leadership administrators, as well as from the Society of Family Planning Research Fund.

Study participants were recruited from the following four sites in Connecticut that provide surgical abortion services of Planned Parenthood of Southern New England: 1) New Haven, 2) West Hartford, 3) Stamford, and 4) Norwich. These four clinics were chosen because of surgical abortion volumes, staff willingness to participate in the study, and clinic resources. Staff at the clinics offered the survey to all patients seeking medical or surgical abortions between mid-August 2012 to November 2012, and a covered box was available to collect the surveys after they were completed. Study subjects completed the

surveys in the waiting room prior to administration of any sedative or abortifacient medications. Study personnel were available by phone to answer any questions from study participants. The target was 150 completed surveys to use in the analysis, set as a convenience sample.

Surveys received were classified into the following categories:

1. Complete: surveys with complete disclosure questions and all or almost all of the rest completed
2. Partially Complete: surveys that are mostly complete, except for missing some components of the key disclosure or contraceptive care provider questions
3. Incomplete: surveys from subjects without a contraceptive care provider
4. Missing: surveys with many missing variables

Data entry and data coding were completed using Microsoft Excel® 2008 for Mac, Version 12.3.5. Once initial data entry and data coding were complete, every survey entry was reviewed and checked for any errors.

Next the coded data was imported into SAS® for Windows, version 9.3. Surveys from the “Complete” category were used for all statistical analyses. The primary outcome variables examined were disclosure of abortion and disclosure of pregnancy to contraceptive care provider. We defined disclosure as past disclosure or intent to disclose and nondisclosure as intent not to disclose or

unsure about disclosure. All included subjects had contraceptive care providers who were distinct from the actual abortion providers, even if the contraceptive care provider was through Planned Parenthood.

Descriptive univariate and bivariate statistics were calculated. The descriptive variables examined include: age, race/ethnicity, education, income, insurance, gravidity, parity, number of previous abortions, abortion type for current abortion (medical or surgical), and current gestational age. The bivariate statistics tabulated the demographics and reproductive health information by both disclosure of pregnancy and disclosure of abortion. Chi-square analyses or Fischer's exact tests were calculated for the categorical variables, and Student's t-test for the continuous variable of age.

Descriptive univariate and bivariate statistics were calculated for contraceptive care provider type, and length of care with that provider. We elicited contraceptive care provider type information from participants by separately asking what type of office and what type of provider they saw for their contraception. We collapsed this information into a single variable for contraceptive care provider with the following options: Planned Parenthood, other obstetrical/gynecological (OB/GYN) clinician, and other non-OB/GYN clinician. Note that OB/GYN provider refers to physicians who specialize in obstetrics and gynecology as well as mid-level providers dedicated to women's health, such as midwives or advanced nurse practitioners in a women's health office. The OB/GYN provider category consists of private obstetrical/gynecological providers who are not part of the Planned Parenthood system, while the Planned

Parenthood category consists of contraceptive care providers who work at Planned Parenthood, distinct from the abortion providers. The non-OB/GYN category includes pediatricians, general medical practitioners, or any other provider type who does not specialize in women's health. We also calculated chi-square analyses for these variables.

Descriptive statistics on methods of contraception used in respondents' entire lives and in the month they became pregnant were calculated, as well as descriptive statistics on reasons for nondisclosure of pregnancy and abortion.

Lastly logistical regression modeling was used to determine what factors are associated with disclosure of pregnancy and abortion. The model included the following variables: age, ethnicity/race, education, income, insurance type, gravidity, parity, previous abortions, current abortion type, current gestational age, and contraceptive care provider characteristics. The model was used to calculate unadjusted and adjusted odds ratios.

Results

Study Population

A total of 427 subjects participated in our study across the four sites. Sixty-six of those surveys were excluded because they contained too many missing variables. Of the remaining 361 surveys, 122 were excluded because those participants indicated that they did not have a contraceptive care provider and an additional 37 because they had incomplete disclosure or contraceptive care provider information (Fig. 1). The final study population consisted of 202 surveys, of which 2% were completed in Spanish and 98% in English. The distribution of the final surveys roughly mirrors abortion volumes across the four clinic sites: 37% from New Haven, 31% from Stamford, 17% from West Hartford, and 15% from Norwich.

Demographics of Study Population

The mean and median ages of the participants were 26 years old and 25 years old, respectively, and the range was between 16 and 44 years. The most common race or ethnicity was Caucasian/white at 39%, followed by African American/black at 35%, Hispanic at 14%, and Other/Mixed at 12%. The plurality of respondents had some college experience but without a degree at 33%, followed by high school or equivalent at 30%, greater than some college at 28%, and less than high school at 9%. In terms of income, almost half (46%) of the study population was poor, earning less than $20,000 per year, a quarter (25%)

made $20-40,000 per year, and 11% made over $40,000 per year. Mirroring the income levels, 56% of participants had Medicaid, 27% had private insurance, and 17% were self-pay or uninsured. The demographics of the study population are presented in Table 1.

Figure 1. Flow Chart from Initial Participants to Final Study Population

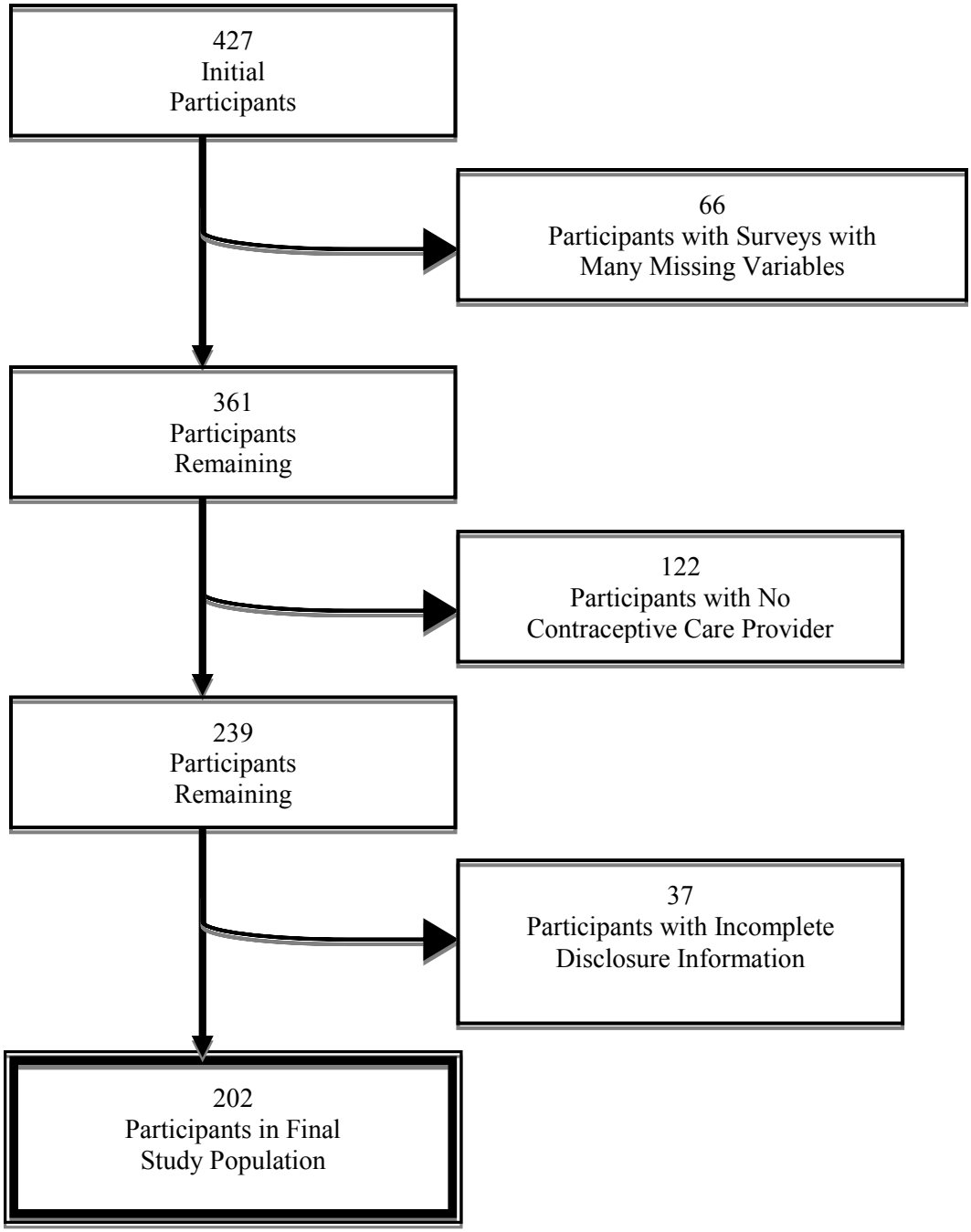

Table 1: Demographics and Reproductive Health Characteristics of Total Study Population

	Total *n (%)*
Age in years	Mean 26 Median 25
Ethnicity/Race:	
Hispanic	28 (14.1)
African American/black	70 (35.4)
Caucasian/white	77 (38.9)
Other: Asian, Native American, Mixed Race, or Other	23 (11.6)
Education:	
Less Than High School	19 (9.4)
High School or GED	61 (30.2)
Some College	66 (32.7)
Associate's Degree or Above	56 (27.7)
Annual Income:	
Less than $20,000	90 (46.4)
$20,000-$40,000	48 (24.7)
More than $40,000	21 (10.8)
Unsure	35 (18.0)
Insurance for the Abortion:	
Private	53 (26.9)
Medicaid	110 (55.8)
None, Self-Pay	34 (17.3)
Gravidity:	
1	39 (19.6)
2	47 (23.6)
3	36 (18.1)
4 or more	77 (38.7)
Parity:	
0	75 (37.9)
1	64 (32.3)
2	44 (22.2)
3 or more	15 (7.6)
Previous Abortions:	
0	84 (42.4)
1	63 (31.8)
2	30 (15.2)
3 or more	21 (10.6)
Abortion Type Planned:	
Surgical	161 (81.3)
Medical	25 (12.6)
Unsure	12 (6.1)
Gestational Age:	
First Trimester	183 (92.4)
Second Trimester	9 (4.6)
Unsure	6 (3.0)

Note: Percentages may not add exactly to 100 due to rounding. A few of the variables presented above had minimal numbers of missing data; all had less than 8 missing.

Reproductive Health Characteristics of Study Population

The plurality of respondents, 39%, had been pregnant 4 or more times. For 20% of women, this was their first pregnancy, and for 24% this was their second pregnancy. However, the plurality of women (38%) had borne no children, a third had had one child, and 22% had had two children. For 42% of participants, this was their first abortion, 32% had one prior abortion, and 15% had two prior abortions. The majority of women (81%) planned to undergo surgical abortion, while 13% decided to have medication abortion. Over 90% of respondents were in the first trimester, and only 5% were in the second trimester. See Table 1 for more details.

Methods of Contraception

Participants most commonly used the following methods of contraception in the month of they became pregnant: condoms (49%), withdrawal (29%), oral contraceptives (19%), and nothing (18%). Condoms were the most common method of contraception (87%) used in respondents' entire lives, followed by oral contraceptives (74%), withdrawal (50%), depot medroxyprogesterone acetate (28%), and emergency contraception (23%). Overall, fewer than 10% of women had ever used the most effective methods, long-acting reversible contraceptives, such as the intrauterine device or subdermal implant. See Table 2 for more details.

Table 2: Most Commonly Used Methods of Contraception

	In the Month of Conception *n (%)*	Ever Used *n (%)*
Withdrawal:		
Withdrawal Alone	16 (8.0)	
Withdrawal with Condoms	18 (9.0)	
Total Withdrawal	57 (28.6)	100 (49.5)
Condoms:		
Condoms Alone	53 (26.6)	
Condoms with Withdrawal	18 (9.0)	
Total Condoms	97 (48.7)	175 (86.6)
Oral Contraceptives:		
Total Oral Contraceptives	38 (19.1)	149 (73.8)
Transdermal Patch:		
Total Patch	1 (0.5)	38 (18.8)
Vaginal Ring:		
Total Vaginal Ring	6 (3.0)	39 (19.3)
Depot Medroxyprogesterone Acetate (Depo):		
Total Depo	6 (3.0)	56 (27.7)
Long Acting Reversible Contraception (LARC):		
Total LARC	4 (2.0)	18 (8.9)
Emergency Contraception (EC):		
Total EC	13 (6.5)	46 (22.8)
Nothing, I thought I wouldn't get pregnant:		
Nothing Alone	27 (13.4)	7 (3.5)
Nothing Total	36 (18.1)	

Note: Subjects were allowed to select multiple methods of contraception so the percentages sum to greater than 100. Three surveys had missing data for the methods of contraception used in the month of conception. Also, not all methods or combinations of methods are presented. Long-acting reversible contraception is defined as the intrauterine device or subdermal implant.

Disclosure Rates

Overall, 58% of women already disclosed or plan to disclose their current pregnancies to their contraceptive care providers, while 42% did not plan to disclose or were unsure about disclosure. A similar percentage of respondents, 56%, already disclosed or plan to disclose their abortion to their contraceptive care provider, and 44% did not plan to disclose or were unsure about disclosure (Table 3). The majority of women had concordant disclosure rates for both the pregnancy and abortion—54% already disclosed or planned to disclose both and

40% did not plan to disclose or were unsure about disclosure of both. For this study, we define nondisclosure to include participants who are unsure about disclosure as well as those who do not plan to disclose. Similarly, we define disclosure to include participants who have already disclosed or plan to disclose. Note that disclosure to contraceptive care provider was examined, not disclosure to the abortion provider.

Table 3: Statistics on Pregnancy and Abortion Disclosure

	Disclosed			Did Not Disclose		
	Already Told Provider *n (row %)*	Plan to Tell Provider *n (row %)*	Total *n (total %)*	Will Not Disclose *n (row %)*	Not Sure *n (row %)*	Total *n (total %)*
Pregnancy	90 (44)	28 (14)	118 (58)	46 (23)	38 (19)	84 (42)
Abortion	72 (36)	40 (20)	112 (56)	49 (24)	41 (20)	90 (44)

Note: Provider refers to contraceptive care provider.

Table 4 and 5 show comparisons of demographic and reproductive health information between those who have disclosed their pregnancy and abortion and those who have not disclosed. The chi-square, Fischer's exact, and Student's t-tests did not show any significant differences between the participants who disclosed and who did not disclose; the p-values were all greater than 0.05. However, the contraceptive care provider type showed statistical significance (p-value 0.009) when examining the differences in disclosure of pregnancy, and approached significance (p-value 0.092) when examining the differences in disclosure of abortion (Table 6 and 7).

Table 4: Demographics and Reproductive Health Characteristics of Study Population Based on Disclosure of Pregnancy

	Those Who Have Not Disclosed to Provider *n (row %)*	Those Who Have Disclosed to Provider *n (row %)*	P-Value
Age in Years	Mean: 26.0	Mean: 26.4	0.6517
Ethnicity/Race:			0.883
Hispanic	12 (42.9)	16 (57.1)	
African American/black	29 (41.4)	41 (58.6)	
Caucasian/white	34 (44.2)	43 (55.8)	
Other: Asian, Native American, Mixed Race, or Other	8 (34.8)	15 (65.2)	
Education:			0.735
Less Than High School	6 (31.6)	13 (68.4)	
High School or GED	24 (39.3)	37 (60.7)	
Some College	29 (43.9)	37 (56.1)	
Associate's Degree or Above	25 (44.6)	31 (55.4)	
Income:			0.931
Less than $20,000	38 (42.2)	52 (57.8)	
$20,000-$40,000	19 (39.6)	29 (60.4)	
More than $40,000	10 (47.6)	11 (52.4)	
Unsure	14 (40.0)	21 (60.0)	
Insurance:			0.321
Private	18 (34.0)	35 (66.0)	
Medicaid	51 (46.4)	59 (53.6)	
Self-Pay	14 (41.2)	20 (58.8)	
Gravidity:			0.175
1	16 (41.0)	23 (59.0)	
2	26 (55.3)	21 (44.7)	
3	13 (36.1)	23 (63.9)	
4 or more	28 (36.4)	49 (63.6)	
Parity:			0.787
0	32 (42.7)	43 (57.3)	
1	26 (40.6)	38 (59.4)	
2	17 (38.6)	27 (61.4)	
3 or more	8 (53.3)	7 (46.7)	
Previous Abortions:			0.204
0	39 (46.4)	45 (53.6)	
1	28 (44.4)	35 (55.6)	
2	10 (33.3)	20 (66.7)	
3 or more	5 (23.8)	16 (76.2)	
Abortion Type:			0.433
Surgical	64 (39.8)	97 (60.2)	
Medical	13 (52.0)	12 (48.0)	
Unsure	6 (50.0)	6 (50.0)	
Gestational Age:			0.699
First Trimester	76 (41.5)	107 (58.5)	
Second Trimester	5 (55.6)	4 (44.4)	
Unsure	2 (33.3)	4 (66.7)	

Note: Chi-square analyses were conducted on each variable, except for age (Student's t-test) and gestational age (Fischer's exact).

Table 5: Demographics and Reproductive Health Characteristics of Study Population Based on Disclosure of Abortion

	Those Who Have Not Disclosed to Provider *n (row %)*	Those Who Have Disclosed to Provider *n (%)*	P-Value
Age in Years	Mean: 26.0	Mean: 26.4	0.6854
Ethnicity/Race:			0.544
Hispanic	16 (57.1)	12 (42.9)	
African American/black	30 (42.9)	40 (57.1)	
Caucasian/white	34 (44.2)	43 (55.8)	
Other: Asian, Native American, Mixed Race, or Other	9 (39.1)	14 (60.9)	
Education:			0.674
Less Than High School	6 (31.6)	13 (68.4)	
High School or GED	29 (47.5)	32 (52.5)	
Some College	30 (45.5)	36 (54.5)	
Associate's Degree or Above	25 (44.6)	31 (55.4)	
Income:			0.946
Less than $20,000	42 (46.7)	48 (53.3)	
$20,000-$40,000	20 (41.7)	28 (58.3)	
More than $40,000	10 (47.6)	11 (52.4)	
Unsure	16 (45.7)	19 (54.3)	
Insurance:			0.093
Private	17 (32.1)	36 (67.9)	
Medicaid	55 (50.0)	55 (50.0)	
Self-Pay	16 (47.1)	18 (52.9)	
Gravidity:			0.135
1	15 (38.5)	24 (61.5)	
2	28 (59.6)	19 (40.4)	
3	15 (41.7)	21 (58.3)	
4 or more	31 (40.3)	46 (59.7)	
Parity:			0.867
0	33 (44.0)	42 (56.0)	
1	29 (45.3)	35 (54.7)	
2	18 (40.9)	26 (59.1)	
3 or more	8 (53.3)	7 (46.7)	
Previous Abortions:			0.496
0	40 (47.6)	44 (52.4)	
1	30 (47.6)	33 (52.4)	
2	11 (36.7)	19 (63.3)	
3 or more	7 (33.3)	14 (66.7)	
Abortion Type:			0.713
Surgical	70 (43.5)	91 (56.5)	
Medical	13 (52.0)	12 (48.0)	
Unsure	5 (41.7)	7 (58.3)	
Gestational Age:			0.777
First Trimester	81 (44.3)	102 (55.7)	
Second Trimester	5 (55.6)	4 (44.4)	
Unsure	3 (50.0)	3 (50.0)	

Note: Chi-square analyses were conducted on each variable, except for age (Student's t-test) and gestational age (Fischer's exact).

Table 6: Contraceptive Care Provider Characteristics Based on Disclosure of Pregnancy

	Those Who Have Not Disclosed the Pregnancy to Provider *n (row %)*	Those Who Have Disclosed the Pregnancy to Provider *n (row %)*	P-Value	Total *n (total %)*
Provider Type:				
Planned Parenthood	10 (23.8)	32 (76.2)	0.009	42 (20.8)
OB/GYN	61 (43.9)	78 (56.1)		139 (68.8)
Other: General Medical, Pediatric, or Not Sure	13 (61.9)	8 (38.1)		21 (10.4)
Length of Care:				
Less than 6 months	16 (44.4)	20 (55.6)	0.178	36 (18.1)
6-12 months	15 (55.6)	12 (44.4)		27 (13.6)
1-2 years	19 (47.5)	21 (52.5)		40 (20.1)
More than 2 years	33 (34.4)	63 (65.6)		96 (48.2)

Note: Row percentages may not add exactly to 100 due to rounding error. Provider refers to contraceptive care provider. OB/GYN provider is defined as physicians specializing in obstetrics and gynecology as well as mid-level providers dedicated to women's health, outside of Planned Parenthood.

Table 7: Contraceptive Care Provider Characteristics Based on Disclosure of Abortion

	Those Who Have Not Disclosed the Abortion to Provider *n (row %)*	Those Who Have Disclosed the Abortion to Provider *n (row %)*	P-Value	Total *n (total %)*
Provider Type:				
Planned Parenthood	13 (31.0)	29 (69.1)	0.092	42 (20.8)
OB/GYN	65 (46.8)	74 (53.2)		139 (68.8)
Other: General Medical, Pediatric, or Not Sure	12 (57.1)	9 (42.9)		21 (10.4)
Length of Care:				
Less than 6 months	17 (47.2)	19 (52.8)	0.090	36 (18.1)
6-12 months	17 (63.0)	10 (37.0)		27 (13.6)
1-2 years	19 (47.5)	21 (52.5)		40 (20.1)
More than 2 years	35 (36.5)	61 (63.5)		96 (48.2)

Note: Row percentages may not add exactly to 100 due to rounding error. Provider refers to contraceptive care provider. OB/GYN provider is defined as physicians specializing in obstetrics and gynecology as well as mid-level providers dedicated to women's health, outside of Planned Parenthood.

Reasons for Non-Disclosure of Pregnancy and Abortion

The most common reason for non-disclosure of the pregnancy and abortion was "I don't want them to know I'm having an abortion" at 39% and 44%,

respectively. Surprisingly, the respondents chose “I’m switching providers” as the second most common reason for nondisclosure of pregnancy and abortion, at 24% and 20%, respectively. Since this was a write-in response to “other reason”, the total number of women who have decided to switch providers is likely an underestimation. Based on what women wrote in their “other” responses, the main reasons for switching providers were related to relocation, insurance changes, or general dissatisfaction for the service they received. Lower percentages of women chose “They do not provide abortions”, “I’m embarrassed I got pregnant”, or “I’m afraid they will judge me” (Table 8 and 9).

Table 8: Reasons for Non-Disclosure of Pregnancy

Reason	Total *n (%)*
I’m embarrassed I got pregnant	14 (20.0)
I don’t want them to know I’m having an abortion	27 (38.6)
I’m afraid they will be disappointed in me	9 (12.9)
I’m afraid they will judge me	11 (15.7)
I’m afraid other people in my life may find out about the pregnancy from their office	6 (8.6)
They do not provide abortions	12 (17.1)
I’m afraid my parents will find out	6 (8.6)
I’m changing providers	17 (24.3)
Other reason	10 (14.3)

Note: The percentages sum to greater than 100 since subjects could select more than one response. The total includes subjects who do not plan to disclose and who are not sure about disclosure. Total number of respondents is 70.

Table 9: Reasons for Non-Disclosure of Abortion

Reason	Total *n (%)*
I’m embarrassed I got pregnant	10 (14.3)
I don’t want them to know I’m having an abortion	31 (44.3)
I’m afraid they will be disappointed in me	7 (10.0)
I’m afraid they will judge me	10 (14.3)
I’m afraid other people in my life may find out about the abortion from their office	7 (10.0)
They do not provide abortions	13 (18.6)
I’m afraid my parents will find out	6 (8.6)
I’m changing providers	14 (20.0)
Other reason	13 (18.6)

Note: The percentages sum to greater than 100 since subjects could select more than one response. The total includes subjects who do not plan to disclose and who are not sure about disclosure. Total number of respondents is 70.

Logistic Regression Modeling For Disclosure of Pregnancy

Logistic regression modeling was conducted for disclosure of pregnancy to determine factors associated with disclosure. The model converged with the inclusion of the following variables: age, ethnicity/race, education, income, insurance type, gravidity, parity, previous abortions, abortion type planned, current gestational age, contraceptive care provider type, and length of care with provider. Having an OB/GYN as a contraceptive care provider was associated with 76% lower likelihood to disclose the pregnancy to one's provider compared to having a Planned Parenthood contraceptive care provider (adjusted OR 0.24; 95% CI 0.08-0.70) (Table 10). In addition, the odds of disclosure of the pregnancy are even lower to a non-OB/GYN provider compared to a Planned Parenthood contraceptive care provider, (adjusted OR 0.05; 95% CI 0.01-0.26). Thus, the odds of women disclosing their abortion are 95% less likely with a non-OB/GYN provider compared to a Planned Parenthood contraceptive care provider. Note that a Planned Parenthood contraceptive care provider is distinct from the abortion provider.

Table 10: Logistic Regression Modeling for Disclosure of Pregnancy

Factor	Unadjusted Odds Ratio (95% Confidence Interval)	Adjusted Odds Ratio (95% Confidence Interval)
Age	1.01 (0.97-1.06)	1.02 (0.94-1.11)
Ethnicity/Race:		
Hispanic	1.05 (0.44-2.53)	0.68 (0.20-2.37)
African American	1.12 (0.58-2.15)	1.51 (0.57-3.98)
Caucasian	Reference	Reference
Other: Asian, Native American, Mixed Race, or Other	1.48 (0.56-3.91)	2.13 (0.59-7.73)
Education:		
Less Than High School	1.41 (0.47-4.20)	2.03 (0.43-9.59)
High School or GED	Reference	Reference
Some College	0.83 (0.41-1.68)	1.26 (0.49-3.30)
Associate's Degree or Above	0.80 (0.39-1.68)	1.19 (0.37-3.78)

Annual Income:		
Less than $20,000	Reference	Reference
$20,000-$40,000	1.12 (0.55-2.28)	0.80 (0.30-2.11)
More than $40,000	0.80 (0.31-2.09)	0.46 (0.10-2.20)
Unsure	1.10 (0.50-2.43)	1.26 (0.42-3.81)
Insurance:		
Private	1.68 (0.85-3.32)	4.74 (1.54-14.61)*
Medicaid	Reference	Reference
Self-Pay	1.24 (0.57-2.69)	4.65 (1.36-15.95)*
Gravidity:		
1	Reference	Reference
2	0.56 (0.24-1.33)	0.41 (0.09-1.10)
3	1.23 (0.48-3.13)	1.62 (0.15-17.29)
4 or more	1.22 (0.55-2.68)	3.32 (0.17-65.55)
Parity:		
0	Reference	Reference
1	1.09 (0.55-2.14)	0.69 (0.14-3.52)
2	1.18 (0.55-2.53)	0.23 (0.03-1.80)
3 or more	0.65 (0.21-1.98)	0.20 (0.02-2.53)
Previous Abortions:		
0	Reference	Reference
1	1.08 (0.56-2.09)	0.73 (0.21-2.48)
2	1.73 (0.73-4.15)	0.68 (0.10-4.72)
3 or more	2.77 (0.93-8.26)	0.82 (0.13-5.37)
Abortion Type Planned:		
Surgical	Reference	Reference
Medical	0.61 (0.26-1.42)	0.20 (0.06-0.65)*
Unsure	0.66 (0.20-2.14)	0.24 (0.04-1.60)
Gestational Age:		
First Trimester	Reference	Reference
Second Trimester	0.57 (0.15-2.19)	1.16 (0.15-9.00)
Unsure	1.42 (0.25-7.95)	6.78 (0.39-117.12)
Provider Type:		
Planned Parenthood	Reference	Reference
OB/GYN	0.40 (0.18-0.87)*	0.24 (0.08-0.70)*
Other: General Medical, Pediatric, Not Sure	0.19 (0.06-0.60)*	0.05 (0.01-0.26)*
Length of Care:		
Less than 6 months	Reference	Reference
6-12 months	0.64 (0.23-1.75)	0.81 (0.21-3.10)
1-2 years	0.88 (0.36-2.18)	1.19 (0.33-4.33)
More than 2 years	1.53 (0.70-3.33)	2.66 (0.89-7.92)

*statistically significant finding (p-value < 0.05)

Note: For the adjusted model, the odds ratios are calculated using 175 surveys since the statistical program deleted 27 surveys from the model due to missing data.

Logistic Regression Modeling For Disclosure of Abortion

Logistic regression modeling was conducted for disclosure of abortion to determine factors associated with disclosure. As with the model for disclosure of pregnancy, this model for abortion disclosure converged with the inclusion of the same variables: age, ethnicity/race, education, income, insurance type, gravidity, parity, previous abortions, abortion type planned, current gestational age, contraceptive care provider type, and length of care with provider. Similarly, women were 72% less likely to disclose the abortion to an OB/GYN contraceptive care provider (adjusted OR 0.28; 95% CI 0.10-0.75), compared to a Planned Parenthood contraceptive care provider as the reference (Table 11). In addition, the odds of disclosure of the abortion are even lower to a non-OB/GYN provider compared to Planned Parenthood, (adjusted OR 0.10; 95% CI 0.02-0.42). Thus, the odds of women disclosing their abortion are 90% less likely with a non-OB/GYN provider compared to a Planned Parenthood contraceptive care provider. Again, the Planned Parenthood contraceptive care provider is distinct from the abortion provider.

Table 11: Logistic Regression Modeling for Disclosure of Abortion

Factor	Unadjusted Odds Ratio (95% Confidence Interval)	Adjusted Odds Ratio (95% Confidence Interval)
Age	1.01 (0.96-1.06)	0.99 (0.91-1.08)
Ethnicity/Race:		
Hispanic	0.59 (0.25-1.42)	0.55 (0.17-1.82)
African American	1.05 (0.55-2.03)	1.48 (0.58-3.77)
Caucasian	Reference	
Other: Asian, Native American, Mixed Race, or Other	1.23 (0.48-3.18)	1.50 (0.44-5.12)
Education:		
Less Than High School	1.96 (0.66-5.84)	2.07 (0.47-9.17)
High School or GED	Reference	Reference
Some College	1.09 (0.54-2.19)	1.11 (0.45-2.74)
Associate's Degree or Above	1.12 (0.54-2.33)	1.32 (0.43-4.02)

Annual Income:		
Less than $20,000	Reference	Reference
$20,000-$40,000	1.23 (0.60-2.49)	0.87 (0.34-2.20)
More than $40,000	0.96 (0.37-2.49)	0.56 (0.13-2.42)
Unsure	1.04 (0.48-2.27)	1.27 (0.44-3.71)
Insurance:		
Private	2.12 (1.07-4.21)*	4.31 (1.48-12.53)*
Medicaid	Reference	Reference
Self-Pay	1.13 (0.52-2.43)	4.25 (1.28-14.09)*
Gravidity:		
1	Reference	Reference
2	0.42 (0.18-1.01)	0.31 (0.07-1.40)
3	0.88 (0.35-2.21)	0.65 (0.07-5.99)
4 or more	0.93 (0.42-2.04)	1.07 (0.06-18.07)
Parity:		
0	Reference	Reference
1	0.95 (0.49-1.86)	1.35 (0.29-6.22)
2	1.14 (0.53-2.41)	0.60 (0.09-3.96)
3 or more	0.69 (0.23-2.09)	0.55 (0.05-6.20)
Previous Abortions:		
0	Reference	Reference
1	1.00 (0.52-1.92)	0.90 (0.28-2.90)
2	1.57 (0.67-3.70)	0.97 (0.16-5.10)
3 or more	1.82 (0.67-4.96)	0.72 (0.12-4.40)
Abortion Type Planned:		
Surgical	Reference	Reference
Medical	0.71 (0.31-1.65)	0.25 (0.08-0.81)*
Unsure	1.08 (0.33-3.53)	0.34 (0.06-1.90)
Gestational Age:		
First Trimester	Reference	Reference
Second Trimester	0.64 (0.17-2.44)	1.15 (0.16-8.48)
Unsure	0.79 (0.16-4.04)	1.85 (0.15-23.18)
Provider Type:		
Planned Parenthood	Reference	Reference
OB/GYN	0.51 (0.25-1.06)	0.28 (0.10-0.75)*
Other: General Medical, Pediatric, Not Sure	0.34 (0.11-0.99)*	0.10 (0.02-0.42)*
Length of Care:		
Less than 6 months	Reference	Reference
6-12 months	0.53 (0.19-1.46)	0.72 (0.19-2.69)
1-2 years	0.99 (0.40-2.44)	1.64 (0.49-5.56)
More than 2 years	1.56 (0.72-3.39)	3.04 (1.07-8.65)*

*statistically significant (p-value <0.05)

Note: For the adjusted model, the odds ratios are calculated using 176 surveys since the statistical program deleted 26 surveys from the model due to missing data.

The association of contraceptive care provider type to disclosure of abortion was similar to the results from the disclosure of pregnancy model.

In creating the adjusted model, the statistical program deleted 26 surveys due to missing variables. As such, some variables showed a new finding of statistical significance, such as insurance type, abortion type planned, or length of care with provider. However, the p-values for these variables from the chi-square calculations with the bivariate statistics and in the unadjusted model were greater than 0.05. The exclusion of 26 surveys in the adjusted model likely skewed this result since this finding was not stable across all calculations. The rest of the odds ratios showed that the remainder of demographics and reproductive health variables had 95% confidence intervals that crossed the null value in both the unadjusted and adjusted models.

Discussion

Interpretation of Disclosure Data

Almost half of women in our study did not disclose their unintended pregnancy or their abortion to their contraceptive care providers. Disclosure was associated with provider type, with women being significantly more likely to disclose to their pre-established Planned Parenthood clinician who is distinct from the abortion provider than to a separate private OB/GYN clinician or non-OB/GYN clinician. No other factors–including demographics, education, insurance status, and income–were consistently associated with disclosure in our analysis.

The reasons for nondisclosure of abortion highlight that fear of stigma is common. Our findings echo other research showing that abortion stigma leads to secrecy of the abortion (12-16, 17). Surprisingly, almost a quarter of women surveyed who chose not to disclose their pregnancy or abortion felt the need to change providers. We are probably underestimating the total number of women who feel this way because this response was gleaned from written responses in the "other" category. This finding may indicate that many women are unhappy with care they received and may blame the provider in part for the unplanned pregnancy. Alternatively, they may fear judgment by these providers, and this may prompt their switch in providers. Other common reasons for nondisclosure were "I'm embarrassed I got pregnant" and "I'm afraid they [my provider] will

judge me", further underscoring that women fear potential judgment and negative attitudes from their providers if they disclose.

Women feel the most comfortable disclosing their pregnancy and abortion to a Planned Parenthood contraceptive care provider compared to a general OB/GYN provider or to other types of providers, such as a general practitioner or pediatrician. Note that we define OB/GYN provider as physicians or mid-level providers devoted to women's health, such as midwives or advanced nurse practitioners, who practice outside of the Planned Parenthood setting. This finding suggests that women perceive Planned Parenthood to be less or non-judgmental in regards to unplanned pregnancy and abortion when compared to other reproductive health care clinicians or non-OB/GYN clinicians. This is in line with the findings of Major and Gramzow that showed that women are less likely to disclose their abortion if they feel like they may be judged negatively (15). Planned Parenthood is known for supporting the full range of women's reproductive health decisions, and our data mirrors women's perception of this fact. Another possible interpretation is that the type of women who go to Planned Parenthood for their abortion and contraceptive care may already feel less stigmatized from abortion at baseline, and thus would be more likely to disclose.

In addition, our finding from the logistical regression modeling that women with private insurance or women who self-pay were more likely to disclose than women with Medicaid is likely a spurious result. From the chi-square analyses of the bivariate statistics, this finding was not significant as the p-values were greater than 0.05. Only with the adjusted model did the odds ratios appear

significant with a confidence interval that did not cross one for both disclosure of pregnancy and abortion. Since a few of the surveys in our study population contained some missing variables, the statistical program removed those from the adjusted model. This likely skewed the results as our total sample size is small.

It is interesting that all of the intrinsic characteristics we examined, such as race/ethnicity, age, income, education level, gravidity, or parity, were not associated with disclosure in any statistically significant way. Only the provider type showed any robust associations with disclosure of pregnancy and abortion. This suggests that abortion stigma is pervasive across all types of women. Women of any socioeconomic status, race/ethnicity, or age may feel the negative effects of abortion stigma that can lead to nondisclosure.

Implications of Nondisclosure of Abortion

Nondisclosure of abortion can harm women's health if the desire for nondisclosure supersedes sound decision-making around potential health complications. Although the complication rate for abortion in the United States is extremely low, nondisclosure of abortion has the potential to exacerbate complications when they do occur. A recent case report published in *Obstetrics and Gynecology* describes unsafe consequences if women continue to keep their abortions a secret (17)**.** One of the cases described a woman who had ruptured membranes after laminaria were placed that led to an infection. Even in the setting of threatened sepsis, she chose to keep silent in fear of facing any stigma

from others. She eventually was rushed to the hospital by ambulance after her condition deteriorated. This whole situation may have been averted if the woman did not feel so stigmatized for the abortion to the point that she would rather risk her own health than disclose the abortion. This example depicts the harms that may result from nondisclosure of abortion and how abortion stigma contributes to a harmful shroud of secrecy.

The case report example underscores the harmful effects of nondisclosure of one's pregnancy and abortion to family members and friends. Imagine that even after the abortion, as the woman continues contraceptive care with her women's health provider, she omits this valuable past medical history. The provider, unknowingly, would continue prescribing a suboptimal contraceptive regimen, such as oral contraceptives, instead of more effective methods. Typical use of oral contraceptives has a 9% failure rate, and its inconsistent use probably led to the unplanned pregnancy and the abortion in the first place, as the majority of cases do (3). A general physician or endocrinologist would agree that a similar situation with a diabetic patient who chooses to keep an admission to the intensive care unit for diabetic ketoacidosis a secret would be considered an obstacle to a basic standard of patient care. In addition, if the glycosylated hemoglobin remained elevated with metformin alone, why would the provider continue this regimen instead of starting insulin, which would provide more effective glycemic control? **The bottom line is that secrecy about abortion can harm women's health and contributes to the epidemic of unintended pregnancy.**

A possible solution to the abortion stigma and nondisclosure dilemma lies in destigmatizing abortion, creating an environment where women feel safe to disclose, and supporting patients in a neutral, non-judgmental way. A qualitative study on abortion stigma described a theme of dissatisfaction with health professional attitudes and demeanors that the women perceived as "judgmental" (14). Another study piloted an intervention of introducing women who had had a recent abortion to a "culture of support" by providing validating messages and information about groups and services that support women in their reproductive decisions (19). The intervention consisted of a documentary screening about women's experiences with abortion, a brochure containing validating messages about their decision for an abortion and contact information for accurate sources of reproductive health information, and the opportunity to discuss their experiences in a group setting (19). The messaging conveyed to the women framed abortion as the "end result of caring and moral women making hard choices" (19). All participants agreed that the intervention was useful, especially the emphasis on how "other women go through this, too" and the positive framing of abortion decisions (19). Most women felt that they could be more resilient to the negative attitudes and judgments from others after the intervention (19). We as health providers need to carry over these lessons learned to create environments where patients feel comfortable disclosing without judgment.

A Focus on Comprehensive Contraceptive Care

Once providers establish a safe environment for women to disclose their abortions, we can then focus on more important issues, such as why the

unplanned pregnancy occurred in the first place and what can be done to prevent another in the future. Ultimately the goal should be about how to find the appropriate method of contraception to shift the focus to prevention of unintended pregnancy. Diabetics need to maintain a medication regimen to keep their glycosylated hemoglobin at goal to prevent a complication like diabetic ketoacidosis, and similarly, women need to find the best contraceptive regimen to prevent an unintended pregnancy and abortion.

Sixty percent of women with unintended pregnancy who undergo abortion used contraception in the month they became pregnant, but the majority of them used it inconsistently or incorrectly (3). This presents a golden opportunity for contraceptive care providers to intervene. If we want to curb the unintended pregnancy epidemic, the focus should shift to encouraging use of the most effective methods of reversible birth control that are “forgettable”, namely the intrauterine device (IUD) or subdermal implant, collectively called long-acting reversible contraception (LARC). LARC eliminates the need to remember to do anything, such as take a daily pill, change a weekly transdermal patch, or change a monthly vaginal ring. In a prospective study, the pill, patch, and ring had contraceptive failure rates that were twenty times higher than with LARC, and women younger than 21 years had double the failure rate with the pill, patch, and ring compared to women over 21 years (20). Other retrospective studies show similar findings of LARC effectiveness compared to other reversible contraception, with the following failure rates: 9% for oral contraceptives, 0.001%

for subdermal implant, 0.14% for levonorgestrel IUD, 0.7% for copper IUD (21-22).

Despite the fact that LARC methods are the most effective, women in the United States more commonly use less effective methods of birth control, such as oral contraceptives. If we as providers can reframe the way we counsel our patients by presenting LARC methods as the most effective at preventing pregnancy, we will start to see improvement in unintended pregnancy, abortion, and repeat abortion rates. The Contraceptive CHOICE project in St. Louis showed that contraceptive counseling that included information on all reversible methods with emphasis on the superior effectiveness of LARC along with the provision of contraception at no cost had a positive impact on reducing the abortion rate among study participants compared to the rest of the region and nation (23).

LARC methods can save expenditures in our health care system. Annually, deliveries from unintended pregnancy alone cost the United States about $4.6 billion dollars (24). If only 10% of women on non-LARC methods of contraception or no contraception switched to LARC, it would save the United States $436 million dollars per year (24). This is an underestimate of the real cost savings because only the costs related to deliveries from unintended pregnancy are considered in this study, and not the cost savings from averting the need for prenatal care or other social and health services related to dealing with unintended pregnancy (24).

While the advantages of LARC methods are numerous, its provision in the United States is low, especially in the post-abortion setting. About 60% of abortion centers provide only 6-15 minutes of contraceptive counseling and most commonly provide oral contraceptives, vaginal ring, or progesterone injection instead of more effective LARC methods (18). Only 32% of centers surveyed provide the intrauterine device or subdermal implant immediately postabortally, with comprehensive family planning centers being most likely to do so (18). Even though the disconnect in care exists between contraception and abortion care that may exacerbate the underutilization of LARC methods, the messaging around contraception needs to change at all levels—from a contraceptive care provider who does not provide abortions to abortion providers who do not spend enough time on contraceptive counseling.

Limitations

Our study is limited by its relatively small sample size, which we set as a convenience sample. However, we were still able to gather some interesting and robust results. There may also be an element of selection bias, since the women who chose to participate may differ from those who did not participate. Another limitation relates to the number of surveys that contained missing data. By excluding those surveys from our study, the results may not be representative.

The results may not be generalizable to other geographic and health care settings. Study subjects were recruited from a setting that predominantly serves women of low socioeconomic status and minority demographics in the Northeast,

which has less restrictive abortion laws compared to other regions, such as the South or Midwest. Although abortion stigma is real and tangible in this region, it may be of a lesser degree compared to other parts of the country and could affect disclosure rates.

Future Directions

We envisioned this study as a pilot, with the expectation that we would improve upon the survey and expand it to a wider variety of women across the United States. We hope to collaborate with other centers of abortion care in different regions, including areas where abortion may be more stigmatized and marginalized.

Conclusions

Almost half of women did not disclose their abortion to their contraceptive care provider. The most common reasons for nondisclosure of the abortion were “I don’t want them to know I’m having an abortion” (44%), followed by “I’m changing providers” (20%). The common reasons why these women do not disclose are due to underlying abortion stigma and their fear of judgment and negative treatment from providers. Women were 72% less likely to disclose their abortion to an obstetrical/gynecological (OB/GYN) provider outside of the Planned Parenthood system (adjusted OR 0.28, 95% CI 0.10-0.75) and 90% less likely to disclose to a non-OB/GYN provider (adjusted OR 0.10, 95% CI 0.02-0.42), compared to a Planned Parenthood contraceptive care provider. The

association of contraceptive care provider characteristics with disclosure, rather than more internal characteristics of the woman herself, demonstrates the pervasive nature of abortion stigma. The political nature and stigma surrounding abortion have isolated it from the rest of women's health care to the point that a gap exists between the preventative care of contraception and abortion care, which is the treatment for failed prevention. Nondisclosure of abortion can lead to potential health complications or the continuation of suboptimal contraceptive regimens. Contraceptive care providers of any type are in a unique position not only to continue destigmatizing abortion, but also to encourage the use of the most effective reversible methods of contraception, including the intrauterine device and subdermal implant. In doing so we may curb the unintended pregnancy epidemic in the United States.

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Appendix: Survey Instrument

Pregnancy Conversations

We are interested to know what women have talked about with their contraceptive providers before they come for an abortion.

Thank you for doing this short, ANONYMOUS survey. We are grateful for your honest and careful answers. Filling out this survey is completely voluntary and confidential. Your care today will not be affected by your decision to do this survey. Your name or other identifying information will NOT be recorded. Feel free to skip any questions you do not wish to answer. If you have any concerns from doing the survey, please ask to speak with the research coordinator or call the phone number below.

Please do NOT fill out this survey if:

- **You are not presenting for abortion services**
- **You are currently a prisoner**
- **You are currently a ward of the state, that is you are younger than eighteen and currently cared for by the Department of Children and Families**

Please return this packet to the PURPLE container marked "Pregnancy Conversations SURVEYS" at the front desk.

If you want to keep our contact information, please keep this first page but return the rest of the packet.

Thank you!

Nancy L. Stanwood, MD, MPH, (203) 737-4665
Clair Kaplan, MSN/APRN, MHS, (203) 752-2864
Lisa An, Medical Student

Pregnancy Conversations

Today's Date: _____

A. How old are you? _____

B. How far do you think you are in this pregnancy?

- ☐1 First trimester (less than 12 weeks)
- ☐2 Second trimester (more than 12 weeks)
- ☐3 I do not know

C. What were you doing to avoid pregnancy IN THE MONTH you got pregnant this time? Check as many birth control methods as you were using:

√	
	1. Condoms
	2. The Pill
	3. The 3 Month Shot, DepoProvera
	4. The Patch, OrthoEvra
	5. The Rhythm Method
	6. Withdrawal, Pulling Out
	7. Just Breast Feeding
	8. The Vaginal Ring, NuvaRing
	9. The IUD, Intrauterine Device, Mirena or ParaGard
	10. Rod Implanted in Arm, Implanon or Nexplanon
	11. Spermicide
	12. Diaphragm
	13. Morning After Pill, Emergency Contraception, Plan B, Next Choice, Ella
	14. Vasectomy of your partner
	15. Tubal ligation, Your tubes tied
	16. Nothing, I thought I wouldn't get pregnant
	17. Nothing, I wanted to be pregnant
	18. Nothing, I did not have a choice
	19. Other:_____

D. If you were NOT using any method of pregnancy prevention when you got pregnant, when was the last time you did use something to prevent pregnancy?

- ☐1 Less than 3 months ago
- ☐2 Between 3 months and 6 months ago
- ☐3 More than 6 months ago

E. What have you EVER used for pregnancy prevention in your whole life? CHECK ALL birth control methods that apply:

√	
	1. Condoms
	2. The Pill
	3. The 3 Month Shot, DepoProvera
	4. The Patch, OrthoEvra
	5. The Rhythm Method
	6. Withdrawal, Pulling Out
	7. Just Breast Feeding
	8. The Vaginal Ring, NuvaRing
	9. The IUD, Intrauterine Device, Mirena or ParaGard
	10. Rod Implanted in Arm, Implanon or Nexplanon
	11. Spermicide
	12. Diaphragm
	13. Morning After Pill, Emergency Contraception, Plan B, Next Choice, Ella
	14. Vasectomy of your partner
	15. Tubal ligation, Your tubes tied
	16. Nothing, I thought I wouldn't get pregnant
	17. Nothing, I wanted to be pregnant
	18. Nothing, I did not have a choice
	19. Other:_____

F. In the past two years, did you have an office visit with a health care provider to talk about preventing pregnancy or about using birth control?

☐1 Yes → **Please continue to the next question**

☐2 No → **Thank you! You may stop the survey and return it to the PURPLE container marked "Pregnancy Conversations SURVEYS" at the front desk.**

G. What kind of office was this provider in?

☐1 Planned Parenthood
☐2 Obstetric/Gynecology (OB/GYN) Office
☐3 Private Medical Office
☐5 Community Health Center
☐6 Pediatric Office
☐7 Other: _____

H. What kind of provider did you see for this birth control care?

☐1 Obstetrical/Gynecological (OB/GYN) Provider
☐2 General Medical Provider
☐3 Pediatric Provider
☐4 Not sure
☐5 Other:_____

I. How long have you been getting care with this provider?

☐1 Less than 6 months
☐2 6 to 12 months
☐3 1 to 2 years
☐4 More than 2 years

J. Does this provider know that you are Pregnant?

☐1 Yes → **SKIP to Question M below**

☐2 No

K. If NO, do you think you will tell them about the Pregnancy?

☐1 Yes
☐2 No
☐3 Not sure

L. If you think you will NOT tell them about your Pregnancy, Please CHECK ALL of the reasons you don't want to tell them:

☐1 I'm embarrassed I got pregnant
☐2 I don't want them to know I'm having an abortion
☐3 I'm afraid they will be disappointed in me
☐4 I'm afraid they will judge me
☐5 I'm afraid other people in my life may find out about the pregnancy from their office
☐6 They do not provide abortions
☐7 I'm afraid my parents will find out
☐8 Other

M. Does this provider know that you are having the Abortion?

☐1 Yes, and they referred me to an abortion provider → **SKIP to Question P on the next page**
☐2 Yes, but they did NOT refer me to an abortion provider → **SKIP to Question P on the next page**
☐3 N

N. If NO, do you think you will tell them about your Abortion?

☐1 Yes
☐2 No
☐3 No, but I will tell them I had a miscarriage
☐4 Not sure

O. If you think you will NOT tell them about your Abortion, Please CHECK ALL of the reasons you don't want to tell them:

☐1 I'm embarrassed I got pregnant
☐2 I don't want them to know I'm having an abortion
☐3 I'm afraid they will be disappointed in me
☐4 I'm afraid they will judge me
☐5 I'm afraid other people in my life may find out about the abortion from their office
☐6 They do not provide abortions
☐7 I'm afraid my parents will find out
☐8 Other reason:_____

P. How would you describe your ethnic background?

- ☐1 Hispanic or Latina
- ☐2 Not Hispanic or Latina

Q. How would you describe you racial background?

- ☐1 African-American or Black
- ☐2 Caucasian or White
- ☐3 Asian or Pacific Islander
- ☐4 Native American
- ☐5 Other: _____

R. What is the highest grade you have finished?

- ☐1 7th grade
- ☐2 8th grade
- ☐3 9th grade
- ☐4 10th grade
- ☐5 11th grade
- ☐6 12th grade
- ☐7 I got my GED
- ☐8 I am in college now
- ☐9 I have an associate's degree
- ☐10 I have a bachelor's degree
- ☐11 I have a graduate degree

S. What type of health insurance are you using to cover your abortion today?

- ☐1 Private Insurance: _____
- ☐2 Medicaid
- ☐3 None, I'm paying for it myself.

T. What is your take-home household income in a year?

- ☐1 Less than $10,000
- ☐2 Between $10,000 and $20,000
- ☐3 Between $20,000 and $30,000
- ☐4 Between $30,000 and $40,000
- ☐5 More than $40,000 per year
- ☐6 Not sure

U. What number pregnancy is this for you, including all births, miscarriages, and abortions?

- ☐1 1st
- ☐2 2nd
- ☐3 3rd
- ☐4 4th
- ☐5 5th
- ☐6 6th or more

V. How many live births have you had?

- ☐1 None
- ☐2 1
- ☐3 2
- ☐4 3
- ☐5 4
- ☐6 5 or more

W. How many abortions (surgical or medication/pill) have you had before today?

- ☐1 None
- ☐2 One
- ☐3 Two
- ☐4 Three or more

X. Are you planning on having a surgical or medication (pill) abortion today?

- ☐1 Surgical Abortion
- ☐2 Medication (pill) Abortion
- ☐3 I don't know

Thank you!
Please return this survey to the PURPLE container marked "Pregnancy Conversations SURVEYS" at the front desk.